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AN EXPERIMENT TO DETE MINE THE EFFECTIVENESS OF ONE HOUR OF SUPPLEMENTARY INSTRUCTION IN A JUNIOR COLLEGE PRE-TRANSFER ENGLISH COMPOSITION CLASS.

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An attempt to measure the effectiveness of one hour of classroom instruction supplementing individual use of a programed text (Joseph Blumenthal's English 3200) in a junior college pre-transfer English composition class was made by placing 24 randomly selected students in two 12-member groups. Group I, the experimental group, received the one-hour supplementary instruction whereas Group II, the control group, did not. Results of a post test showed that achievement had not been affected. There was, however, a unique value to the instruction as it related to concepts. Conclusions based on the investigation were (1) the programed material did a creditable job of teaching many items in the workbook, (2) instruction in the classroom did not seem to have much effect on learning when the instruction covered the same material as was found in the textbook, and (3) instruction which supplemented the details found in the textbook and which dealt with concepts appeared to help in the understanding of the applications of the mechanics of grammar. (DG)

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AN EXPERIMENT TO DETERMINE THE EFFECTIVENESS OF ONE HOUR OF SUPPLEMENTARY INSTRUCTION IN A JUNIOR COLLEGE PRE-TRANSFER ENGLISH COMPOSITION CLASS

In Partial Fulfillment

of the Requirements for Education 261D

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CLEARINGHOUSE FOR
JUNIOR COLLEGE
INFORMATION

Introduction. Junior college instruction has come under a certain amount of scrutiny in the past few years and different methods of instruction have been devised to improve classroom teaching. Effective teaching is considered to be measurable by the amount of learning observed. This kind of measurement is directly tied to teaching objectives. One instructional innovation which has received some attention in recent years has been programmed textbooks. The pre-test and post-test forms, used in many programmed texts, lend themselves to an objective evaluation of classroom instruction.

This report does not propose to evaluate the use of programmed material or the manner in which such material is being used in general. The experiment deals with a particular pre-transfer English composition class required of students failing to score high enough on the SCAT or ACT examinations. The direct concern of the report is the effectiveness of classroom instruction.

The Problem. To determine the effectiveness of one hour of classroom instruction supplementing individual use of a programmed text in a junior college pre-transfer English composition class.

The Design. The instructional experiment involved a class of twenty-four junior college students who were randomly placed in two groups. Group I, made up of twelve students, received the treatment of one hour of supplementary instruction. Group II, also including twelve students, did not receive the supplementary instruction.

Pre-tests and post-tests were administered to both groups and

the means of the post-test scores of the groups were compared by t test. There was no emphasis placed on the pre-test because equality between the groups is implied in the random assignment of subjects. Moreover, the unit under study was a new area of study and as Campbell and Stanley point out, pre-tests are not considered to be useful in these situations.[1] Pre-tests were given to the class because they had been part of the routine set in the class during the semester.

The treatment was one hour of supplementary instruction. The group receiving the instruction is the experimental group and the group not receiving the instruction is the control group. The experimental group is referred to as Group I and the control group as Group II. An alpha level of .05 was chosen for the experiment.

Procedures. The Subjects. The subjects in the experiment are students who have not scored higher than the 55th percentile, nationally, on the SCAT entrance examination. The students who fall into this classification are often described as being "marginal" in that the likelihood of their continuing in college work is limited. Twenty-four students, six females and eighteen males, began the experiment and the number of students in attendance during the total experimental period varied from fifteen to twenty-four. The average age of the group was nineteen years.

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[1] Donald T. Campbell and Julian C. Stanley, "Experimental and Quasi-Experimental Designs for Research on Teaching," Handbook of Research on Teaching, N.L. Gage, Editor (Chicago: Rand McNally and Company, 1963), p. 195.

Selection. Assignment of subjects to the two groups was made at random, using the class roster and a table of random numbers determined by casting dice. Initially, each group contained twelve students, three females and nine males. Group I had eight students who completed the experiment and Group II had nine students finishing.

Materials used in the experiment. The materials for the experiment are from Joseph Blumenthal's English 3200.[2] The particular unit being taught was 3-A, "The Complex Sentence." The pre-test and post-test used in the experiment are part of the programmed textbook.[3]

The Treatment. The hour of instruction used as the treatment took place with eight students from Group I in attendance. The lesson plan covered the following questions and activities:

1. What are the characteristics of a complex sentence? Examples were read and discussed. Extended discussion of subordinate relations.
2. What are the characteristics of a clause? Examples were read and discussed.
3. What are the characteristics of an adjective clause, adverb clause, noun clause? What questions do they each answer? What are their functions in a sentence? Examples were read and discussed.

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[2] Joseph C. Blumenthal, English 3200 (New York: Harcourt, Brace and Company, 1962).

[3] See Appendix A and B.

4. As each of these questions were discussed the instructor wrote class responces on the board under the headings:

   Clause Function Placement Introductory words
   Elimination of words Content

5. The use of who, whom, whose, that, which. When and where to use these words in a complex sentence.

6. Summation by the instructor.

The Post-test. The evaluation of instruction took place on the second day following the treatment. Unfortunately, measurement could not immediately follow the treatment because of the class schedule.

Of the twenty-four students who began the experiment, seventeen took the post-test. On the day of the test no other instruction was given. The students varied in the time needed to complete the test, thirty minutes being the shortest time and forty-five minutes being the longest. The tests were scored by the experimenter.

Analysis and Results. Type of analysis. A *t* test was used to compare the mean scores of the two groups. Standard deviations, means and *t* were computed according to the formulas given in E. F. Lindquist, A First Course in Statistics.[4]

Results of test analysis. Means, standard deviations and N's are shown in Table I.

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[4] E. F. Lindquist, A First Course in Statistics (Boston: Houghton-Mifflin Company, 1942), Chapter 8.

TABLE I

MEANS AND STANDARD DEVIATIONS OF POST-TEST SCORES

	MEAN	S.D.	N
Group I (Experimental)	27.375	3.777	8
Group II (Control)	25.333	3.162	9

The t value is 1.213. The critical value for fifteen degrees of freedom is 1.75 for a one-tail test at the .05 level. The hypothesis of no difference between the means of the experimental and treatment groups must, therefore, be accepted.

Conclusions and Discussion. The scores for this very limited experiment indicate that the treatment did not effect achievement. However, it is of some interest to note that in the group receiving the treatment one half of the subjects scored thirty or above and that none in Group II scored over twenty-nine. (see Table II).

An informal interview with the subjects after the post-test revealed that all of Group I wanted to continue the supplementary instruction. The instructor felt that supplementary instruction in concepts rather than in mechanical details is of greater value to the students. By inspection the experimenter determined that students who scored above thirty in the post-test were able to apply conceptual relationships as required in the last section of the test. Those who

TABLE II

FREQUENCY DISTRIBUTION OF POST-TEST SCORES

Group I		Group II	
Score	f	Score	f
21		21	2
22		22	1
23	2	23	
24	1	24	
25		25	
26	1	26	2
27		27	1
28		28	2
29		29	1
30	2	30	
31	1	31	
32	1	32	
	8		9

did not score above twenty-six did not seem similarly able.[5]

The students in Group II, who were not exposed to any discussion of concepts or relationships involved in the study of complex sentences, relied on rote learning which was "self-taught" through the use of the programmed textbook. They were not able to correctly convert simple sentences into a complex sentence. Yet, six of the nine students in Group II were able to score higher than four students (one half) of the experimental group. This would seem to indicate that the programmed material sufficiently explained some of the material to be learned by written examples.

There may be some benefit to briefly reviewing a few factors which may have influenced the outcome of this experiment in terms of internal validity.

1. History. The fact that a day lapsed between the time of the treatment and the post-test would seem to be important in that the advantage of immediate response to the treatment was lost. The day that the college was not in session was a holiday and a good deal might have happened to the students involved to negate the treatment.
2. Maturation. The post-test was given on a Friday, which is the last day of the week and this class is the last hour in the day for these students. The mental alertness of the students would seem to be lower at this point in their school week and day.

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[5] See Appendix B, Questions 31 to 38 in the test.

3. Testing. Both groups were equally effected.
4. Instrumentation. The experimenter corrected the post-test and any subjective considerations by the instructor were eliminated.
5. Statistical regression. Not applicable.
6. Selection. Subjects were selected randomly.
7. Experimental mortality. Seventeen students out of twenty-four who began the experiment completed the post-test.
8. Interaction of factors. Possible undetermined effects.

Several conclusions drawn from the experiment but inapplicable outside of this particular experimental setting are:

1. The programmed material does a creditable job of teaching many items to be learned by reading and practice in the workbook.
2. Instruction in the classroom does not seem to have much effect on learning when the instruction covers the same material as is found in the textbook.
3. Instruction which supplements the details found in the textbook, and which deals with concepts, does seem to help in understanding the applications of the mechanics of grammar.

Summary. An experiment was conducted on a class of pre-transfer English composition students to determine the effectiveness of one hour of instruction to supplement the use of a programmed textbook. The class was divided into two randomly selected groups. One group received the supplementary instruction and the other group did not. A post-test was given to both groups and the means from the test was compared by t. An alpha level of .05 was assigned to the experiment.

The critical value for fifteen degrees of freedom at the .05 level is 1.75. The t value for the experiment was 1.213. The null hypothesis of no difference between the two groups was, therefore, accepted. However, by inspection it was determined that there was an unique value to the instruction as it related to concepts. It was also concluded that the programmed text was effective in individual study.

BIBLIOGRAPHY

Blumenthal, Joseph C. English 3200. New York: Harcourt, Brace and Company, 1962.

Campbell, Donald T. and Julian C. Stanley, "Experimental and Quasi-Experimental Designs for Research on Teaching," Handbook of Research on Teaching, N.L. Gage, Editor. Chicago: Rand McNally and Company, 1963, p. 195.

Lindquist, E. F., A First Course in Statistics. Boston: Houghton-Mifflin Company, 1942, Chapter 8.

Appendix A - PRE-TEST

Name_____ Date_____ Class_____

Unit 3-A THE COMPLEX SENTENCE

After each statement write TRUE or FALSE.

1 To be a clause, a word group must contain both a subject and a verb. 1_____
2 To subordinate an idea means to put it in the form of a sentence. 2_____
3 An adjective clause is one that does the work of an adjective by modifying a noun or a pronoun. 3_____
4 A subordinate clause makes complete sense by itself when it is removed from the sentence to which it is attached. 4_____
5 An adjective clause usually comes before the word it modifies. 5_____
6 A clause that tells when, where, how, or why about the verb is an adverb clause. 6_____
7 The most movable kind of clause is the adverb clause. 7_____
8 A sentence that contains an adverb clause, an adjective clause, or a noun clause is a complex sentence. 8_____
9 The conjunctions and, but, and or are used to form complex sentences. 9_____
10 Every compound sentence contains a subordinate clause. 10_____

Identify each italicized clause by writing ADJECTIVE, ADVERB, or NOUN in the space at the right.

11 My uncle, *who is a good fisherman*, taught my brother and me how to fly-cast. 11_____
12 *If an item sells slowly*, the store is more than likely to discontinue it. 12_____
13 It is said that Thomas Edison was an inventor *to whom nothing seemed impossible*. 13_____
14 *That any modern person should believe in astrology* is beyond my understanding. 14_____
15 It is unfortunate that few tourists visit our town *since the expressway was built*. 15_____
16 It turned out that the stop watch *we used* was not accurate enough. 16_____
17 Most people will deny *that they are superstitious*. 17_____
18 The first milestone in lighting occurred *when the caveman brought fire into his cave*. 18_____
19 *Although the natives have little*, the majority of them are very generous. 19_____
20 Pasteur's discovery was *that disease is caused by* living organisms. 20_____

Copy the relative pronoun that is appropriate for careful speech and formal writing.

21 There I met my cousin (whom, who) I had never met before. 21_____
22 The dog (who, that) followed us seemed to be hungry. 22_____
23 We visited a factory (who, which) makes jet engines. 23_____
24 Any person (who, whom) would invest in such stocks must be very stupid. 24_____
25 The people for (which, whom) I work are very considerate. 25_____
26 The seniors are the ones (who, whom) I suppose will object. 26_____
27 We must know immediately (who, whom) is planning to go. 27_____
28 You ought to report (whoever, whomever) owns that car. 28_____
29 You all know the lady to (who, whom) we dedicate this song. 29_____
30 The actor (that, which) played this part is an old-timer. 30_____

Combine each pair of sentences by changing the italicized sentence to the kind of clause indicated in the parentheses. Write a complete sentence.

31 You are his best friend. You can advise him. (adverb clause)_____
_____

32 Larry told us about a short cut. It saved us ten miles. (adjective clause)_____

33 I shot my first basket. My self-confidence returned. (adverb clause)
_____

34 Mrs. Brady went to the cookie jar. She kept her odd change in it. (adjective clause)_____

Eliminate the AND in each sentence by changing the italicized statement to the kind of clause indicated in the parentheses. Write a complete sentence.

35 A person talks too slowly, and the other person's mind is likely to wander. (adverb clause)_____

36 I have a friend, and his father is an amateur magician. (adjective clause)_____

37 Mr. Ferris took a taxi, and the hotel was only two blocks away. (adverb clause)_____

38 I had a new camera, and I was eager to try it out. (adjective clause)
_____

Appendix B - POST-TEST

Name_____ Date_____ Class_____

Unit 3-B THE COMPLEX SENTENCE

After each statement write TRUE or FALSE.

1 When we put an idea into a phrase or a clause, rather than into the main part of a sentence, we subordinate it. 1____
2 An adjective clause is one that begins with an adjective. 2____
3 The relative pronouns who (whose, whom), which, and that introduce adverb clauses. 3____
4 An adverb clause can modify a verb. 4____
5 To change a sentence to an adverb clause, we would need to drop a word. 5____
6 A clause that can be shifted to another position in a sentence is likely to be an adverb clause. 6____
7 A clause that can be used as the subject or the object of a verb is a noun clause. 7____
8 Most of the subordinating conjunctions that start adverb clauses can also start adjective clauses. 8____
9 A complex sentence can show more types of relationships between ideas than a compound sentence can. 9____
10 Every compound sentence contains an adverb clause, an adjective clause, or a noun clause. 10____

Identify each italicized clause by writing ADJECTIVE, ADVERB or NOUN in space at the right.

11 If the pressure becomes too high, the safety valve opens and prevents an explosion. 11____
12 Drivers must realize that cars can be as dangerous as guns. 12____
13 The space that separated the two houses was very narrow. 13____
14 Because the spark plugs were wet, the engine wouldn't start. 14____
15 You can't swim at that beach unless you are a member of the club. 15____
16 Whether our land contains oil is still an uncertainty. 16____
17 Some of the popular song hits Gershwin composed are still among my favorites. 17____
18 His clothes always look as if he had slept in them. 18____
19 After a period of time, the unclaimed freight is auctioned off for whatever it will bring. 19____
20 One of the beauty spots of a Mexican market is the section where flowers are sold. 20____

Copy the relative pronoun that is appropriate for careful speech and formal writing.

21 Jack made many friends (which, who) later helped him. 21_____
22 The crows (that, who) nest in this tree wake us up. 22_____
23 It's about an actor (who, which) tried to make a comeback. 23_____
24 People (whom, who) are honest themselves usually trust others. 24_____
25 The new officer is a man (whom, who) the underworld fears. 25_____
26 The boy to (whom, who) I had lent my book was absent. 26_____
27 The student (which, that) organized the club is its president. 27_____
28 You are the one (who, whom) I think must make this decision. 28_____
29 There he met his son (who, whom) he had not seen for years. 29_____
30 (Whoever, Whomever) owned this car took good care of it. 30_____

Combine each pair of sentences by changing the italicized sentence to the kind of clause indicated in the parentheses. Write a complete sentence.

31 A lady phoned about our dog. She refused to give her name. (adjective clause)_____

32 Sue is afraid of dogs. She has never been bitten by one. (adverb clause)
_____

33 I have several friends in other cities. I exchange letters with them. (adjective clause)_____

34 The forests were depleted. The thriving communities became ghost towns. (adverb clause)_____
_____

Eliminate the AND in each sentence by changing the italicized statement to the kind of clause indicate in the parentheses. Write a complete sentence.

35 One day Martin went to the beach, and a very strange thing happened. (adjective clause)_____
_____

36 My uncle has a set of golf clubs, and he seldom uses them. (adverb clause)_____
_____

37 Gail is in my Spanish class, and her brother won a scholarship. (adjective clause)_____
_____

38 Ellen had a slight accident, and she did'nt want to drive again.

(adverb clause)_____
_____